THE SYSTEMATIC POSITION OF THE GENERA *RAMPHOCAENUS* AND *MICROBATES*

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THE systematic position of the neotropical genera *Ramphocaenus* and *Microbates* has been the subject of considerable speculation. Originally considered to be troglodytine, they were placed on the basis of external characters in the mesomyodian family Formicariidae by Burmeister (1856, 3: 72) and Sclater (1858: 243), following Müller's (1845) division of the passerine families on the basis of the musculature of the syrinx. They were retained in the Formicariidae by all reviewers through Cory and Hellmayr (1924: 205).

In 1921, however, W. DeW. Miller, in a presentation before the American Ornithologists' Union, showed that on external structural characters, particularly the presence of an aftershaft, *Ramphocaenus* and *Microbates* could not be retained in the Formicariidae, and he proposed to erect a separate oscine family for them, placed near the Sylviidae. Wetmore (1943: 306) found on dissection that *Ramphocaenus* has an oscine syrinx and placed it in the Sylviidae. Finally, Peters (1951: 213) has removed *Ramphocaenus*, *Microbates*, and the related *Psilorhamphus* from the Formicariidae for subsequent inclusion in the Sylviidae.

Within the Sylviidae, *Ramphocaenus* and *Microbates* have recently been placed in the tribe Polioptilini by Mayr (1946: 18, 27) and Mayr and Amadon (1951: 18), the only neotropical group they recognize of the Old World sylviids.

Polioptila is a closely knit genus of about ten species, equally well represented in Central and South America, but apparently with a tropical North American center of evolution (Mayr, 1946; 18).

Ramphocaenus (2 species) and *Microbates* (2 species), as genera, are very similar to each other, except for slight differences in proportions of tail, bill, and tarsus. *Psilorhamphus* (1 species), which we have not seen, appears similar but with a different, heavily spotted plumage. Although *Ramphocaenus* and *Microbates* have been linked with *Polioptila*, they appear to be much more closely related to certain other Old World warblers, especially the African genus *Macrosphenus*. This genus, too, has had various places in classification. Originally considered troglodytine by its describer, Cassin, it has since, as stated by Sclater (1930: 365), been "placed in the Sylviidae by Reichenow, the Timaliidae by Sharpe [and] the genus seems to have affinities to the Laniidae." The more recent reviewers, Mackworth-Praed and

Grant (1944: 444) and Delacour (1946: 12), have placed it again in the Sylviidae, the latter in the tribe Orthotomini. *Macrosphenus* contains three species, all African (some would also include the genus *Suaheliornis* in it). There is some variation within the genus *Macrosphenus*, and it is the species *M. kempi* that is especially close to *Ramphocaenus* and *Microbates*, not only in form but in color and pattern.

In gross appearance of skins, the species of *Polioptila* are all much alike, slaty and whitish with short fine bills, fairly long tails with white outer tail feathers, moderate feet that fall well short of the tip of the tail. By contrast *Ramphocaenus*, *Microbates*, and *Macrosphenus kempi* are brown, gray, and buffy; the bill is much longer and heavier; the feet are larger, reaching in most species to the tip of the tail; and there are elongate, silky flank and rump feathers. A tabular summary of the points in which they differ follows:

	Polioptila	*Ramphocaenus, Microbates,* and *Macrosphenus kempi*
BILL	Fine; shorter than head; very slightly hooked	Longer than head; wider, especially basally; more distinctly hooked
RICTAL BRISTLES	Moderate	Present but less well developed
WING	Moderately rounded; remiges narrow, moderately curved, and 10th (outermost) about half length of 9th	More rounded; remiges broader and more curved; 10th primary considerably longer than half of 9th
TARSUS	Slender, scutellate	Scutellations more obscure
TOES	Rather slender; basal phalanx of middle toe joined with outer toe and partly to inner toe; claws moderate	Slightly heavier; basal phalanx of middle toe completely, and second phalanx partly, united with outer toe; basal phalanx of middle toe partly united with inner toe; claws slightly heavier
TAIL	About as long as wing	Shorter than wing (in *Psilorhamphus* said to be as long as wing)
PLUMAGE	Rump and flank feathers dense, somewhat decomposed at tips, but little lengthened	Rump and flank feathers distinctly decomposed, silky, and lengthened.
COLOR	Predominantly slaty and whitish	Browns and grays
HABITAT	Trees and bushes	Shrubbery in forest
NEST	Compact cup fastened to branches of trees	Deep cup loosely attached to broad leaves of a plant, 18 inches from ground (one record *Ramphocaenus*)

The conclusion from these data seems inescapable, that *Ramphocaenus* and *Microbates* (and probably *Psilorhamphus*) are much more like *Macrosphenus* than they are like *Polioptila*. Mr. William Beecher, who has examined the jaw musculature of specimens of *Polioptila*, *Ramphocaenus*, and *Macrosphenus*, says that he has found nothing

contrary to this view. Indeed, if it were not for their distribution one would be inclined to consider uniting, generically, *Ramphocaenus* and *Microbates* of the Neotropics and *Macrosphenus* of Africa.

One should consider the possibility of convergent evolution, the African and the American birds having evolved from different parts of a common basic stock. However, the lack of related forms in the New World makes this unlikely.

TABLE 1

MEASUREMENTS OF CERTAIN FORMS DISCUSSED (IN MILLIMETERS)

	Wing	*Tail*	*Exposed culmen*	*Tarsus*	*Specimens*
Macrosphenus kempi	60	40	18	21	one male
Macrosphenus flavicans	62	41	16	20	av. 4 males
Macrosphenus concolor	56.8	42.6	14.5	21.5	av. 5 males
Ramphocaenus melanurus	48	43	—	—	Sclater.[1]
Ramphocaenus rufiventris rufiventris	51.2	40.9	24	20.9	av. 18 males, Ridgway.[2]
Microbates cinereiventris semitorquatus	53.9	27.7	18.1	23.7	av. 13 males, Ridgway.[2]
Microbates collaris	51	25.5	—	—	Sclater.[1]
Polioptila caerulea caerulea	52.1	50.3	9.9	17.2	av. 24 males, Ridgway.[3]

[1] Sclater, 1890: 260, 263. [2] Ridgway, 1911: 85, 89. [3] Ridgway, 1904: 716.

The alternative is that there have been two intrusions of the Old World warblers into tropical America; one resulted in the present *Polioptila*, and the other in the *Ramphocaenus* group.

Disregarding cosmopolitan groups, the avifaunae of Africa and South America are most distinct, having few close relatives in common. Most of the latter belong to families that are pan-tropical in distribution, including the Trogons and Barbets among land birds and the Heliornithidae, Jaçanidae, Anhingidae, and Rostratulidae among aquatic birds. All of these groups are old and presumably have possessed temperate representatives in the intervening areas at some time in the past. Such representatives would have bridged the present large gaps in their ranges. There are also two species, *Plegadis falcinellus* and *Dendrocygna bicolor*, which are circumtropical without showing even racial variation, and they are almost certainly examples of transoceanic dispersal.

There are, however, among land birds a very few cases where the same or closely related genera are found both in South America and Africa. One of these is *Ciccaba*, a neotropical genus of wood owls, which has a single widespread species in Africa; a second is the monotypic owl genus *Jubula* of Africa, which, according to Peters (1938: 184) is scarcely separable from the neotropical *Lophostrix*. Among

passerine birds, the relationship between *Ramphocaenus* and its allies and *Macrosphenus* appears to be unique.

Final action on the classification and nomenclature of the various genera of the Sylviidae should await a revision of the family. Until this is done we suggest that it be recognized that certain small neotropical genera are more similar to certain African birds than to the New World gnatcatchers, and that some of the genera now recognized are very finely split. The zoogeographical implications seem evident, however; the few neotropical representatives of this large, predominantly Old World family do not form a natural group, and apparently represent two invasions.

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